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ABSTRACT

The primary goals of the Program for Achievement in Chinese and English and Spanish was to provide for the special linguistic, academic, and cultural needs of Chinese and Spanish speaking students in grades seven, eight, and nine. Program activities capitalized on students' native language proficiency while they developed competency in English. Program components included instructional activities, staff development, parent and community involvement, and curriculum and resource center development. Evaluation of the program was completed through the use of pre/posttest student achievement data and questionnaires completed by teachers. Questionnaire findings indicated that the staff development component was successful. Achievement test data indicated inconsistent attainment of goals in both Chinese-English and Spanish-English components across all grade levels. Recommendations for future program implementation are included. (MK)

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ED189255

COMMUNITY SCHOOL DISTRICT 2

210 East 33rd Street

New York, New York 10016

INTERIM REPORT

ESEA Title VII

PROGRAM FOR ACHIEVEMENTS IN CHINESE, ENGLISH AND SPANISH

(PACES)

Project # 403 CH 80292

Grant # G007700415

1978-79

Function # 5035-97603,4

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CHAPTER I

IMPLEMENTATION OF PROGRAM AND EVALUATION PLANS

I. INTRODUCTION[1]

This is the final evaluation report of the 1978-79 Program for Achievements in Chinese and English and Spanish (PACES) in Community School District 2.

This was the second year of the Bilingual-Bicultural PACES funded under ESEA Title VII for the junior high school level. In the first year (1977-78) it became a very important educational project in the school community. In that first year project personnel established a close working relationship with the parents, the various community groups, and the heads of the participating schools, thus bringing about a very positive attitude toward bilingual education programs for youngsters of limited English-speaking proficiency.

Community School District 2 consists of a multi-cultural and multi-ethnic student population of more than 20,000 children. The number of Chinese students in the district is more than 4,800, the largest Chinese population in New York State, while the Hispanic population exceeds 6,600. The majority of these students speak a language other than English and many of them have difficulty in adjusting to an all English-speaking school environment and find it difficult to achieve normal and successful academic progression in school.

The primary goal of the Program for Achievements in Chinese English and Spanish (PACES) was to provide for the special linguistic, academic, and cultural needs of non-English-speaking children. Activities capitalized on their native language proficiency while they developed competency in English. There were three complementary goals in the program: 1) The training of bilingual personnel; 2) The development of bilingual-bicultural curricula; and 3) The continued development of the Bilingual Resource Centers in the district.

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[1]This section is adapted from the Interim Report prepared by Mr. Jacob Wong.

These goals for the school year 1978-79 built on similar goals for 1977-78 but were to be strengthened in meeting the needs of the target population.

II. IMPLEMENTATION OF THE PROGRAM

A. Scope

Because of the fact that the 1977-78 project proved to be valuable to the target population's self-esteem as well as to their academic achievements, the same schools requested participation in this project for 1978-79. Therefore, in this second year 281 children in grades 7, 8, and 9 were serviced in the following four schools: J.H.S. 65, Transfiguration School, and St. Patrick School in the Chinese component and J.H.S. 17 in the Spanish component.

Almost all of the participants in the project were newly arrived immigrants from Hong Kong, Taiwan, Puerto Rico, and other Spanish-speaking countries. These and those others who had arrived in 1977-78, in the second year of the project continued learning their native language skills and subject areas in their native languages (Chinese/Spanish). At the same time they received intensive instruction in English as a second language which was reinforced in content subject areas.

The number of full-time staff supported by project funds is: One bilingual resource specialist/assistant coordinator, one bilingual resource specialist, three educational assistants, two family assistants, and one bilingual typist. The part-time personnel supported were: one bilingual guidance counselor (Chinese), one bilingual guidance counselor (Spanish), evaluation consultants, consultants (material development), and teacher trainers and consultants (for after-school workshops).

In the original application for funding, the District requested two (2) guidance counselors, one for each of the two language groups of participants. However, only one such position was funded. Since it was not possible to recruit one counselor who would be able to handle the job in a trilingual capacity, the

solution was to fund two half positions, with the district seeking funds from other sources to convert these half positions into full positions. In fact, both of these part-time positions were supplemented by other funds to full positions. In this, and other ways, funds from tax-levy, Title I, and other reimbursable sources were allocated by the District to supplement bilingual programs in these schools.

B. Instructional Activities

Classroom instructional activities were carried out as proposed during the academic year and during the summer of 1979 as well. In addition to the instruction of subject areas in both English and the dominant language, cultural activities became a strong component of the social studies curriculum. Participants in the project were actively involved in cultural assembly programs such as the Puerto Rican Discovery Day and the Chinese New Year. Performances by bilingual children in these assembly programs have been made into local television programs. On April 10, 1979, the project sponsored a Chinatown Children's Festival, which the evaluators observed. It was a beautiful creative experience.

In cooperation with Art Resource for Teachers and Students (ARTS), the bilingual children were taught ethnic folk dances and songs and those of the United States in the cultural curriculum. The children participated in theatrical productions of historical events and literary works of different ethnic backgrounds. The District and ARTS have jointly published numerous booklets on instructional and cultural activities, and the Chinese and Spanish language program staff have developed a variety of materials on cultural activities and a Chinese bilingual newsletter.

C. Staff Development

Staff training and development efforts consisted of a few components. First of all, bilingual personnel received college credit course training from a Seton Hall and Fordham University Consortium.

Chinese bilingual personnel enrolled in bilingual education courses, held in Chinatown for the convenience of the teachers. Fordham University at Lincoln Center conducted courses for the Spanish bilingual personnel ranging from Puerto Rican culture to bilingual education methodology. The Consortium has been very sensitive to District needs and the District and the Consortium have worked very closely with each other in the promotion of bilingual education programs and bilingual materials development. For example, in 1978-79 the District pilot tested materials developed by Seton Hall University.

In addition to these credit courses for in-service training offered by the institutions of higher education, the project held a one-day pre-service training session with bilingual personnel in other programs, and had bi-weekly After-School Workshops. The Workshops, which emphasized practical instructional techniques, were well received by teachers and educational assistants, in part because there were many opportunities for free discussion and exchange of ideas for professional growth.

In 1978-79 more than twenty After-School Workshops pertaining to various aspects of bilingual education were held. Topics covered included bilingual education program design, development of curriculum and materials, techniques for achieving parental involvement, materials for pilot testing, teaching English as a second language, methods for teaching the native language, materials for and suggested activities for Puerto Rican Discovery Day and Chinese festivals, manipulation of materials for bilingual instruction, testing and evaluation (with the evaluators participating) and staff development.

D. Parent and Community Involvement

That the present project was funded was the direct result of the community and parent involvement in and support of this project. As soon as the project was approved for funding, the District Bilingual/Bicultural Advisory Committee members

were notified and meetings were held. Discussions of personnel recruitment and selection, program implementation and coordination of all other bilingual projects in the District were held. Subsequent meetings were also held with project personnel to discuss plans for the expansion of bilingual programs to be supported by more tax-levy and other funds. Committee meetings were held on an on-going basis, usually once a month.

Early in September, a news release was made to announce the Title VII grant, and throughout the year the project director and the bilingual coordinators made numerous visits to, and held conferences with, community people and agencies for discussions pertaining to the project. Project personnel frequently attended Parents Association meetings and held conferences with parents, and as in previous years parents made many contributions towards making the cultural curriculum and assembly programs successful.

E. Curriculum Development and Resource Centers

There continues to be a dire need for curriculum materials development for both the Chinese and Spanish components. The bilingual resource specialists have been responsible for the establishment of the two Mini-Resource Centers at J.17 (Spanish) and The Yung Wing School (Chinese), where bilingual conferences, workshops and other in-service training activities are held. The materials and reference collections are mainly for the teachers and pupils in the elementary school level. The limited funds under the present project only allowed the addition to existing resources of some books and materials appropriate for the junior high school level so that teachers and participants in the project will have access to additional bilingual resources. Therefore, it was not possible to establish a Mini-Center for the Chinese junior high school.

Some Title VII projects are funded for additional personnel such as curriculum specialists for different subject areas. Unfortunately, this project

was not funded for such positions. Therefore, curriculum development for the project was carried out to the extent possible by the project director, bilingual coordinators, and the bilingual resource specialists. Some materials developed have been disseminated to other projects. The few national material development networks have not been able to develop materials to meet the immediate needs of the project.

III. INSTRUCTIONAL OBJECTIVES

The specific instructional objectives evaluated were the following:

A. Chinese/English Component

Participating students will:

1. improve significantly in reading in their native language, Chinese, as revealed by performance on the Project-developed Test in Reading Chinese,

2. improve significantly in reading in their second language, English, as revealed by performance on the Stanford Achievement Test in Reading,

3. improve significantly in mathematics as revealed by the Stanford Achievement Test,

4. demonstrate knowledge of native history and culture as revealed by at least 60 percent achieving a score of 65 percent or more on assessment tests prepared by resource teachers and/or curriculum specialists,

5. demonstrate improved attitudes toward school by at least 60 percent receiving higher teacher ratings on at least 5 of the 10 items on the Fordham Scale for Rating Pupil Attitude, and lower ratings on no more than one item.

B. Spanish/English Component

Participating students will:

1. improve significantly in reading in their native language, Spanish, as revealed by performance on the Inter American Tests, Prueba de Lectura,

2. improve significantly in reading in their second language, English, as revealed by performance on the Stanford Achievement Test in Reading,

3. improve significantly in mathematics as revealed by the Stanford Achievement Test,

4. demonstrate knowledge of native history and culture as revealed by at least 60 percent achieving a score of 65 percent or more on assessment tests prepared by resource teachers and/or curriculum specialists,

5. demonstrate improved attitudes toward school by at least 60 percent receiving higher teacher ratings on at least 5 of the 10 items on the Fordham Scale for Rating Pupil Attitude and lower rating on no more than one item.

IV. Evaluation Plans

A. Instruments

To test the achievement-related objectives of this program required five different achievement measures and one attitude scale. Two of the five were developed by program staff simply because in areas such as reading Chinese, and knowledge of history and culture for either the children in the Spanish or the Chinese components, measures do not exist. Measures used were:

1 & 2. The Stanford Achievement Test in Reading and Mathematics which have demonstrated sufficient reliability and sensitivity and validity to merit use for the measurement of progress in these areas.

3. The Inter American tests, to be used here for measuring ability in reading in Spanish, have a long and mixed history. Nevertheless, the program staff has concluded that this remains the most useful and relevant of the few available measures of ability to read in Spanish.

4. The Project-Developed Test of Ability to Read Chinese. This area is obviously the one in which we would prefer a standardized test, as reflected in the use of the Prueba de Lectura, despite some misgivings. But the lack of available tests, and the absolute necessity to test in this area, forced the staff to develop a reading test in Chinese. The fact that

each language has its own aspects to be tested ruled out the simple translation approach. Other reading tests were used to provide models, i.e., tests for reading vocabulary, testing for comprehension at levels of complexity ranging from the sentence to the paragraph and supplement these with those aspects of reading which program staff consider unique to learning to read Chinese in New York City, such as learning the full range of printed characters.

Split-half reliability estimates were obtained for Levels III and IV[1] of this test in 1978-79 and when the Spearman-Brown prophecy was applied the reliability of Level III was estimated at .92 and Level IV at .99, obviously superb reliability for this Project-Developed Test.

5. The test of knowledge of history and culture of the ethnic group involved was needed for two ethnic groups, Chinese and Hispanic. Obviously, the same items do not cut across culture; but to provide an ability to do some comparisons across the program, the same test blueprint was used covering: knowledge of significant persons, places and events in the history of the ethnic group; knowledge of the significance of meaning of cultural values, dimensions; knowledge of contributions of the cultural group and members to the larger culture of the United States; knowledge of current concerns, issues, people, within or for the ethnic group.

Reliability estimates were obtained for the two levels of this test as well, and for Level III the Spearman-Brown estimate was .68, and for Level IV it was .77, both acceptable for evaluation purposes.

6. The attitude scale used was the Fordham Scale for Rating Pupil Attitudes towards Self and School. This is a simple 10-item rating scale which the

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[1]These were the two levels used in this program.

teacher completes at the end of the year by giving a rating on pupil attitude both at the beginning and end of the year, and so providing an estimate of change. While this involves memory and subjective ratings, previous experience with the instrument indicates that it does provide a reliable estimate of pupil attitude change as reflected in teacher perceptions.

B. Testing Evaluation Objectives

In reading in both languages and in mathematics the estimate of change or growth during the academic year was derived from change by each child from the pre- to post-administration of the tests. The statistical significance of these changes was based on an analysis of the pattern of gains and declines against the chance expectation of 50%-50%.

Mobility in the schools involved is so high that typically relatively few pupils are available for this analysis. Thus, the numbers tested pre-only and post-only will be provided as well to provide a sense of the total groups tested each time.

In the area of knowledge of culture and history, the program developers have stated their goal in terms of the level of such knowledge to be achieved by a target percentage of children by the end of the year, and so a post-test only was used in this instance. To determine if the target percentages stated in the objectives have been achieved, the percentage who, in fact, achieved the desired standard will be tested against the level stated in the objective using the normal curve test for testing the significance of the difference between two percents.

This same procedure will be used in the area of pupil attitude, where the goal is also stated in terms of a target percentage reflecting a specific set of improved attitude ratings.

CHAPTER II

TEACHER EVALUATION OF UNIVERSITY COURSES

As noted in Chapter I, teachers in the program attended courses given by a Consortium of faculty from Seton Hall University (for teachers in the Chinese-English program) and by Fordham University (for teachers in the Spanish-English program). The value of these courses was evaluated through a questionnaire developed by program staff using the "Student Questionnaire for appraising a course and its Information" of Syracuse University as a model. It was completed by 29 participants and the summary of these data appears in Table 1.

If one first considers sections A and B of Table 1, referring to the instructional processes and instructor characteristics, it is clear that the data are strongly positive, typically with two-thirds or more choosing the most positive option given and for many questions with few or no respondents choosing the negative options. The most consistently positive response was to faculty's willingness to help students individually (item B1) where 90 percent chose the most positive option. But for five of the other eleven items in these areas, 80 or 83 percent chose the most positive option. Within these two areas (A and B) only one item reflected a negative evaluation by more than three percent: Item A5 on stimulation of thinking where 10 percent felt that students were involved in ways which "did little to stimulate thinking."

In Area C, too, where the questions concerned the overall evaluation of the personal and professional value of the experience, a solid majority (from 52 to 62 percent) chose the strongly positive options, and as on the previous questions those who were not most positive, chose other positive rather than negative options.

This is an improvement over 1977-78, where on these criteria there was a solid cluster with negative evaluations, ranging from the 15 percent who thought

Table 1

Teacher Evaluation of College Courses

in Percent

($\underline{N}$ = 29)

Criterion and Response Options[a]	Percent Selecting Option
A. Planning and Development	
1. Objectives were:	
a. Fully explained	83
b. Discussed	17
2. Plans were:	
a. Very well organized	80
b. Evident	17
c. Loose, vague	3
3. Assignments were:	
a. Meaningful, constructive	64
b. Adequate, helpful, fairly clear	36
4. Principles, concepts developed were:	
a. Well, very well illustrated	80
b. Fairly well illustrated	20
5. Student involved in way which:	
a. Strongly stimulated thinking	69
b. Moderately stimulated thinking	21
c. Did little to stimulate thinking	10
B. Instructor Characteristics	
1. Willingness to help students individually:	
a. Very willing	90
b. Quite willing	10
2. Appreciation of student point of view:	
a. Understanding, friendly	72
b. Sympathetic	28
3. Ability, willingness to answer questions:	
a. Excellent	83
b. Good	17
4. In dealing with students, was:	
a. Always completely fair	83
b. Generally impartial, fair	17

(continued on next page)

Table 1 (continued)

Criterion and Response Options[a]	Percent Selecting Option
5. Regard for students, as individuals:	
a. Always genuine, sincere	66
b. Understanding, respectful	28
c. Generally good	6
6. Grasp of subject and related fields was:	
a. Extremely good, thorough, broad	69
b. Good, extensive	25
c. Good in subject, fair in related fields	3
d. Fair in subject, weak in related fields	3
C. Usefulness, value of courses	
1. The specific information will be:	
a. Extremely useful	52
b. Quite useful	38
c. Of some use	7
d. Of very little use	3
2. In course, became acquainted with:	
a. A great many new ideas	52
b. A substantial number of new ideas	41
c. Some new ideas	7
3. The experience of taking this course has been of:	
a. Great positive and personal value	62
b. Substantial positive and personal value	28
c. Some positive and personal value	7
d. Little or no positive or personal value	3
4. In terms of professional growth in field of bilingual education, the course was:	
a. Extremely valuable	52
b. Quite valuable	31
c. Of some value	14
d. Of very little value	3

[a]The negative options are not listed if no one chose them.

they had become acquainted with "few" or "no" new ideas in the course to the 22 percent who felt the experience had been of "little" or "no" positive or personal value to them. For 1978-79 this negative cluster was only from three to seven percent.

In summary then, the teachers come through as saying that the objectives were fully explained, plans well organized, assignments constructive, principles well illustrated and that faculty were understanding, very willing to help and answer questions, always fair, sincere, and understanding and with broad grasp of their subject field and related fields. They found that the courses stimulated their thinking, with useful information, a substantial number of new ideas, of great positive and personal value and quite valuable to their professional growth. All in all, this dimension of the staff development program was clearly successful. (Figure 1 lists the courses completed by the project personnel)

Figure 1

Courses Taken by Teachers through Fordham University

Seton Hall University Consortium

Including the Following

Puerto Rican and other Hispanic-Amer. Hist. and Cult.

Urban Education: Problems and Perspectives

Impact of Prejudice on Minority Gps. in America

Uncovering and Devel. Academic Talent

Human Relations in Classroom

Sec. School Curric. Theories and Devel.

Diagnosis and Corrective Reading Instruction

Reading Comprehension: Cog., Lang., and Context

Teaching English to Speakers of Other Languages

Principles of Bilingual Education

Dev. of Comm. Skills in Bilingual Students

Bilingual Curr. Materials Workshop

Introduction to Research

Psychology of the Emotionally Disturbed

Fundamental Counseling and Inter. Skills

Current Ed. Philosophies in U.S.

Psychopathology of Childhood

CHAPTER III

FINDINGS FROM THE TESTING PROGRAM

I. THE SCOPE OF THE PROGRAM

The program proposal called for the provision of services to a total of 281 students in grades seven through nine of the four participating public and non-public schools, 185 in the Chinese-English compoment (145 public, 40 non-public) and 96 in the Spanish-English component.

Pre-post data from the four schools participating are available for a total of 278 students, almost identical to the proposed population for the program. By program, data are available for 141 public and 32 non-public school children in the Chinese-English component (compared to goals of 145 public and 40 non-public), and for 105 public school children in the Spanish-English component (compared to a goal of 96). Thus, it is evident that in 1978-79 the PACES program provided a full academic year of instruction to the number of children proposed.

But some academic services were provided to even more children, for given the high level of mobility in the District, considering only those with pre-post data is an underestimate, for there are children for whom we have only pre-test or post-test data. Considering those students for whom some data were available (either pre, post, or both) the sample consists of 230 public and 62 non-public school students in the Chinese-English component, and 126 public school students in the Spanish-English component.

Thus, Community School District 2 implemented the 1978-79 PACES program at, and beyond, the level proposed.

II. CRITERIA FOR DECIDING ON EXTENT OF ACHIEVEMENT OF OBJECTIVES

Whenever more than one grade and/or type of school is involved in an evaluation, one expects some inconsistency in results, and so some objective system is necessary upon which to base conclusions as to the achievement of objectives.

In this chapter, if there are statistically significant findings for all grades and schools (public and non-public) with no more than one exception, the objective will be considered "fully achieved." If the data indicate achievement of the objective in more than half of the comparisons, but not all, then the objective will be considered "generally achieved." If there is evidence of achievement for about half the comparisons, the objective will be labeled "moderately achieved," and it will be considered "partially achieved" if there is success in some, but fewer than half of the grades. Finally, if there is no evidence of success or such evidence in only one of several comparisons, the objective will be considered "not achieved."

III. DATA FROM THE CHINESE-ENGLISH COMPONENT

A. Chinese Language Arts

Table 2 presents the data to test progress in Chinese Language Arts, as measured by the Program-Developed Test. As the Table indicates, there was significant progress only in Grade 7, where 80 percent of the children gained, with 54 percent gaining 12 or more points. In Grades 8 and 9 fewer than half of the children gained at all, and even those who did gained relatively few points with no ninth grader and only 9 percent of the eighth graders gaining more than 11 points.

Thus, the objective was only partially achieved.

B. Knowledge of Chinese History and Culture

The program objective related to knowledge of Chinese History and Culture stated that at least 60 percent of the students would achieve a score of 65 or more on the Program-Developed Test, given at the end of the school year. Thus, Table 3 presents the distribution of the post-test scores. Only in Grade 9 was the criterion achieved, with 74 percent of the students scoring between 65 and 89. In each of the other grades only 21 percent achieved the criterion score, with

Table 2

Summary of Changes in Chinese Language Arts,

Chinese-English Program, by Grade, in Percent

Statistic	7	8	9
A. Number with data	105	60	25
B. Number with pre-only score	10	17	1
C. Number with post-only score	11	9	1
D. Number with pre-post scores	84	34	23
E. Of these, percent who:			
1. Did not change:	1	6	26
2. Gained:			
a) 18 or more points	27	3	
b) 12-17 points	27	6	
c) 6-11 points	10	15	4
d) 1-5 points	16	15	22
3. Declined:			
a) 1 point		6	17
b) 2-4 points	11	20	13
c) 5-9 points	7	6	9
d) 10 or more points	1	23	9
F. Summary, in percent, who:			
1. Did not Change	1	6	26
2. Gained	80	39	26
3. Declined	19	55	48
G. Statistical Significance	S	N.S.	N.S.

Table 3

Distribution of Post-Test Scores in Chinese History and Culture, Chinese-English Program, by Grade, in Percent

Statistic	Grade 7	Grade 8	Grade 9
A. Number with Post-Test Score	78	64	34
B. Percent Achieving Score of:			
1. 91 - 100			
2. 81 - 89	7	2	24
3. 65 - 79	14	19	50
4. 45 - 64	28	39	24
5. 20 - 44	41	40	2
6. Less than 20	10		
C. Percent Achieving or Exceeding Criterion Score of 65 or Higher	21	21	74
D. Conclusion on 60 Percent of Children Achieving Criterion Score	N.A.	N.A.	A.

51 percent of the seventh graders, and 40 percent of the eighth graders scoring below 45 percent.

Thus, for culture, as for language arts, the objective was only partially achieved.

C. English Reading Skills

Improvement in English reading skills was measured through the administration of the sub-tests in Vocabulary and Reading Comprehension of the Stanford Achievement Test Battery. The data on change from pre- to post-tests are presented in Table 4. For the public school students, significant progress was made only in Grade 7 and then only on the Vocabulary sub-test. In Grades 8 and 9 as well, a majority gained on the Vocabulary sub-test, but the pattern of changes was not statistically significant in these grades. For Comprehension, half or fewer showed a gain of any kind, and as many or more showed declines, reflecting no change in this aspect of reading ability.

Given this combination of no gains in any grade for Comprehension, and a gain only in Grade 7 for Vocabulary, the evaluators conclude that no consistent gains were made in the area of English reading in the Public school.

In contrast, in the non-public schools, significant progress was made in both Grades 7 and 8 for Vocabulary and Comprehension. Thus, overall, the objective was partially achieved for the total program.

D. Mathematics

Table 5 presents the data obtained to test progress in mathematics through administration of two sub-tests of the Stanford Achievement Battery, those related to Mathematical Concepts and Mathematical Computation. Scanning the last line of Table 5 indicates that in the public and non-public schools half or more gained in each grade on both sub-tests but the pattern of gains was statistically significant only for Grades 7 and 9 in Concepts.

Table 4

Summary of Changes in English Readi g Skills, Chinese-English Program, by Grade and Subtest, Stanford Achievement Test, Public and Non-Public Schools

		Public						Non-Public			
		7		8		9		7		8	
	Statistic	Voc.	Rd. Comp.	Voc.	Rd. Comp.	Voc.	Rd. Comp.	Voc.	Rd. Comp.	Voc.	Rd. Comp.
A.	Number with data	107	107	72	72	46	46	51	51	12	12
B.	Number with pre-only score	7	5	6	5	3	2	1	1		
C.	Number with post-only score	12	11	3	4	1	3	1	1	2	2
D.	Number with pre-post scores	88	91	63	63	42	41	49	49	10	10
E.	Of these, percent who:										
	1. Did not change	6	7	8	5	5	5	12	8	20	
	2. Gained:										
	a) 20 or more points			3	3				2		
	b) 10 - 19 points	18	11	8	3		2	4	18		10
	c) 5 - 9 points	53	28	16	13	21	5	10	36	20	30
	d) 1 - 4 points	10	10	30	22	36	27	18	16	10	40
	3. Declined:										
	a) 1 - 4 points	8	11	19	22	29	24	14	10	10	
	b) 5 - 9 points	5	18	13	17	7	15	12	8	30	20
	c) 10 - 19 points		15	3	10	2	22		2	10	
	d) 20 or more points				5						
F.	Summary, in percent, who:										
	1. Did Not Change	6	7	8	5	5	5	12	8	20	
	2. Gained	81	49	57	41	57	34	62	72	30	80
	3. Declined	13	44	35	54	38	61	26	20	50	20
G.	Statistical Significance	S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	S.	N.S.	S.

Table 5

Summary of Changes in Mathematics, Chinese-English Program, by Grade and Subtest, Stanford Achievement Test, Public and Non-Public Schools

Statistic	Public						Non-Public	
	7		8		9		7	
	Concepts	Comp.	Concepts	Comp.	Concepts	Comp.	Concepts	Comp.
A. Number with data	107	107	66	66	46	46	51	51
B. Number with pre-only score	6	6	8	5			15	15
C. Number with post-only score	11	13	3	3	4	4	1	2
D. Number with pre-post score	90	88	55	58	42	42	35	34
E. Of these, percent who:								
1. Did not change	7	3	7	16	2	17	3	9
2. Gained:								
a) 20 or more points						2		
b) 10 - 19 points	4	6		2	7	2	3	
c) 5 - 9 points	42	30	9	15	29	21	23	43
d) 1 - 4 points	18	20	40	37	43	24	31	18
3. Declined:								
a) 1 - 4 points	14	20	36	24	14	29	34	30
b) 5 - 9 points	11	19	9	6	2		6	
c) 10 - 19 points	4	2			2	5		
F. Summary, in percent, who:								
1. Did Not Change	7	3	7	16	2	17	3	9
2. Gained	64	56	49	54	79	49	57	61
3. Declined	29	41	45	30	18	34	40	30
G. Statistical Significance	S.	N.S.	N.S.	N.S.	S.	N.S.	N.S.	N.S.

Thus, the data in the Table indicate partial achievement of the Mathematics objective, for the gains in Concepts.

E. Student Attitude

The last objective tested for the evaluation related to improved attitude towards school, as measured by teachers' ratings at the end of the academic year on the Fordham Scale. Teachers made two year-end ratings, their impressions of pupil attitude at the beginning of the year and at the end, and improvement was estimated from a change in the two ratings.

The data presented in Table 6 indicate that neither in the public nor the non-public schools was the criterion achieved; in fact, the percent who gained on five or more items was less than 20 percent in each grade of the public schools.

Since this analysis was based upon change, the evaluators did a separate analysis to determine if the lack of change was a function of initially high ratings. For example, had most of the pre-program ratings been 8 or 9 there would be little room for improvement. However, this was not the case; in fact, no eighth or ninth grader received any pre-program rating in excess of a 5, and the seventh graders typically had sufficiently low or middle ratings to provide a reasonable test of improvement.

Thus, we conclude that there was no improvement in student attitude in the Chinese-English component.

IV. DATA FROM THE SPANISH-ENGLISH COMPONENT

A. Spanish Reading Ability

The objective related to improvement in Spanish reading was tested through the pre-post administration of the Prueba de Lectura from the Inter-American series of tests for Spanish-speaking children. Table 7 presents the distribution of changes on this test. In all three grades, a statistically significant pattern of gains was observed, with 74 to 80 percent of the children gaining, with

Table 6

Summary of Changes in Teacher Perception of Pupil Attitude, Chinese-English Program, Fordham Scale, By School and Grade

Statistic	Public			Non-Public	
	7	8	9	7	8
A. Number with pre-post scores	107	68	35	14	11
B. Of these, the percent who were rated improved on:					
1) 1-2 items	39	38	49	14	18
2) 3-4 items	41	28	25	36	36
3) 5-6 items	8	7		21	27
4) 7-8 items	1	4	3	14	9
5) 9 items				7	
6) all 10 items					
C. Percent who met or exceeded criterion of improving on 5 or more items	9	11	3	42	36
D. Conclusion on 60 Percent of Children Achieving Criterion	N.A.	N.A.	N.A.	N.A.	N.A.

Table 7

Summary of Changes in Spanish Reading,

Spanish-English Program, by Grade

Statistic	7	8	9
A. Number with data	45	40	41
B. Number with pre-only score	9	9	4
C. Number with post-only score	10	7	12
D. Number with pre-post scores	26	24	25
E. Of these, percent who:			
1. Did not change	4	4	
2. Gained:			
a) 40 or more points		12	4
b) 20 - 39 points	8	25	36
c) 10 - 19 points	27	16.5	16
d) 1 - 9 points	49	21	24
3. Declined:			
a) 1 - 9 points	8	4	20
b) 10 - 19 points		8	
c) 20 - 39 points	4	8	
F. Summary, in percent, who:			
1. Did Not Change	4	4	
2. Gained	74	74.5	80
3. Declined	12	20	20
G. Statistical Significance	S	S	S

particularly substantial gains in Grades 8 and 9, where 37 and 40 percent respectively gained 20 or more points.

Thus, there was clear and consistent achievement of the objective related to improvement in ability to read in Spanish.

B. Knowledge of Hispanic History and Culture

As in the Chinese-English component, the objective related to knowledge of history and culture was expressed in terms of a percentage of students (60 percent) who would achieve a score of 65 or more on the post-test in the area. As the data in Table 8 indicate, only in Grade 8 was the criterion percentage achieved. Here, 56 percent achieved a score of 65 or more, and this percentage was not significantly lower than the criterion of 60 percent. In the other grades, fewer than 40 percent achieved the criterion score.

Thus, the objective related to knowledge of history and culture was only partially achieved.

C. English Reading Ability

Table 9 presents the distribution by grade of scores on the Stanford subtests in Vocabulary and Reading Comprehension, the criterion tests for improvement in English reading. Although half or more gained, there was no statistically significant pattern of gains in Vocabulary in any of the three grades, but there was improvement in Comprehension for Grades 8 and 9. Moreover, these gains were substantial: 32 percent in Grade 8, and 42 percent in Grade 9 gained 10 or more points.

Interestingly enough, this pattern of gains in Comprehension but not Vocabulary is counter to what has become a typical pattern over the years in evaluation, for in most instances where there is gain in one area but not both, it is Vocabulary which shows gains.

Thus, we conclude that there was partial achievement of the objective related to improvement in English reading.

Table 8

Distribution of Post-Test Scores on Knowledge of History and Culture, Spanish-English Program, by Grade, in Percent

Statistic	Grade 7	Grade 8	Grade 9
A. Number with Post-Test Score	33	36	36
B. Percent Achieving Score of:			
1. 100		6	6
2. 80 - 96	3	6	11
3. 65 - 79	33	44	22
4. 45 - 64	37	33	30
5. 20 - 44	27	11	31
6. Less than 20			
C. Percent Achieving or Exceeding Criterion Score of 65 or Higher	36	56	39
D. Conclusion on 60 Percent of Children Achieving Criterion Score	N.A.	A.	N.A.

Table 9

Summary of Changes in English Reading, Spanish-English Program, by Grade and Subtest on Stanford Achievement Test

Statistic	Grade and Subtest					
	7		8		9	
	Vocab.	Comp.	Vocab.	Comp.	Vocab.	Comp.
A. Number with data	44	44	40	40	33	35
B. Number with pre-only score	7	7	7	7	3	4
C. Number with post-only score	5	5	8	8	5	3
D. Number with pre-post scores	32	32	25	25	26	28
E. Of these, percent who:						
1. Did not change	12	13	4			4
2. Gained:						
a) 20 points or more		3	4	4		21
b) 10 - 19 points	22	18	8	28	7	21
c) 5 - 9 points	12	22	12	28	7	18
d) 1 - 4 points	16	13	32	16	31	18
3. Declined:						
a) 1 - 4 points	19	22	24	8	36	10
b) 5 - 9 points	19	6	16	8	19	4
c) 10 - 19 points				4		
d) 20 or more points		3		4		4
F. Summary, in percent, who:						
1. Did Not Change	12	13	4			4
2. Gained	50	56	56	76	45	78
3. Declined	38	31	40	24	55	18
G. Statistical Significance	N.S.	N.S.	N.S.	S.	N.S.	S.

D. Mathematics

Table 10 presents data for changes in the two Stanford sub-tests on Mathematical Concepts and Computation. None of the patterns was statistically significant and so no statistically significant gains were made in Mathematics in the Spanish-English component.

E. Student Attitude

Table 11 indicates that the criterion percent (60 percent) showing improvement on at least five items on the ten-item Fordham Scale for Rating Attitude towards School and Self was exceeded in Grade 9 and the 50 percent who achieved it in Grade 7 was not significantly lower than the criterion. However, in Grade 8 only 18 percent achieved the criterion and so this objective is considered generally achieved.

Table 10

Summary of Changes in Mathematics, Spanish-English Program, by Grade and Subtest, Stanford Achievement Test

Statistic	7		8		9	
	Concepts	Comp.	Concepts	Comp.	Concepts	Comp.
A. Number with data	44	44	7[a]	7[a]	33	31
B. Number with pre-only score	7	7			2	1
C. Number with post-only score	5	5			5	
D. Number with pre-post scores	32	32	7	7	26	30
E. Of these, percent who:						
1. Did not change	3	9	29	29	8	3
2. Gained:						
a) 20 points or more		6				
b) 10 - 19 points		19			8	13
c) 5 - 9 points	22	19	14		23	20
d) 1 - 4 points	43	22	14	43	31	27
3. Declined:						
a) 1 - 4 points	26	25	14		15	20
b) 5 - 9 points	6		14	14	15	17
c) 10 - 19 points			14	14		
d) 20 points or more						
F. Summary, in percent who:						
1. Did Not Change	3	9	29	29	8	3
2. Gained	65	66	28	43	62	60
3. Declined	32	25	42	28	30	37
G. Statistical Significance	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

[a]This test was given in one school only, and then in one class.

Table 11

Summary of Changes in Teacher Perception of Pupil Attitude, Spanish-English Program, Fordham Scale, by Grade

	Statistic	Grade 7	Grade 8	Grade 9
A.	Number with pre-post scores	30	31	34
B.	Of these, the percent who were rated improved on:			
	1) 1-2 items	20	19	6
	2) 3-4 items	27	9	15
	3) 5-6 items	16	9	12
	4) 7-8 items	27	9	27
	5) 9 items	7		3
	6) all 10 items			31
C.	Percent who met or exceeded criterion of improving on 5 or more items	50	18	73
D.	Conclusion on 60 Percent of Children Achieving Criterion	A.	N.A.	A.

CHAPTER IV

EVALUATORS' CONCLUSIONS AND RECOMMENDATIONS

Figure 2 summarizes the extent to which the five major program objectives were achieved, as reflected in the objective data obtained. In the Chinese-English program, four objectives were partially achieved, with statistically significant progress seen in one grade only. One objective was not achieved, attitude towards school and self.

Considering grade in school as the variable, there were gains for seventh graders in reading in Chinese, English reading vocabulary and Mathematical Concepts, and for ninth graders in History and Culture and Mathematical Concepts. In the eighth grade only the non-public school students gained significantly on any measure, and for them it was Reading Comprehension.

Thus, while there was progress, it was inconsistent both across objective and within grade, with the most consistent progress in Grade 7 and the least in Grade 8.

In the Spanish-English component, the objective related to improvement in reading in Spanish was fully achieved with statistically significant gains in all three grades. The objective related to improved attitude was generally achieved with the criterion reached in two grades. Those related to improvement in English reading and to improved knowledge of history and culture were partially achieved with gains in one grade. Only the objective related to mathematics was not achieved.

Looking at grade, the seventh graders gained significantly only in Spanish Reading, while the eighth graders gained in that skill, but also in History and Culture and Reading Comprehension. The ninth graders also gained in Spanish Reading, Reading Comprehension, and Attitude towards Self and School.

Figure 2

Summary of Achievement of Objectives

Objective	Conclusion[1] for: Chinese-English Program	Spanish-English Program
1) Reading in Native Language	Partially achieved Gain Grade 7 public only	Fully achieved Gains in all grades
2) Knowledge of History and Culture	Partially achieved Criterion met Grade 9 public only	Partially achieved Criterion met in Grade 8 only
3) English Reading	Partially achieved Gains Vocabulary, Grade 7 public only Gains Comprehension, Grades 7, 8 non-public only	Partially achieved No gains Vocabulary Gains Comprehension Grades 8 and 9
4) Mathematics	Partially achieved Gains Concepts, Grades 7 and 9 public No gains on Computation	Not achieved No gains Concepts or Computation
5) Attitude towards Self and School	Not achieved	Partially achieved Gains in Grade 9 only

[1] Conclusions refer to public school students only unless otherwise indicated.

Thus, there is inconsistency for the Spanish-English component as for the Chinese-English component, and inconsistency too across components, for the seventh grade which had the most positive data for the Chinese-English component had less success than grades eight or nine in the Spanish-English component.

The evaluators suggest that program and school staff should seriously examine the teaching-learning rationale for the program to try and identify the reasons for the lack of a consistent success. This should be done jointly by the staffs of both components, for interestingly enough at least partial success was achieved for every objective in one of the components. Thus, there is evidence that within the program there is successful teaching taking place, and demonstrated learning. The problem now is to identify these successful practices, and establish them throughout the program so that a broader, more consistent pattern of gains will be demonstrated in the futu...